Trade and Industrial Education
Course: Networking Architecture
Course Code # 5757
1 Credit

School Year _____

Term:____Fall____Spring

Student:	Grade:
Teacher:	School:
Number of Competencies in Course:	**30**
Number of Competencies Mastered:	
Percent of Competencies Mastered:	

STANDARD 1.0: Students will demonstrate an understanding of basic network structure.

Learning Expectations	Check the appropriate Mastery or Non-Mastery column	Mastery	Non-Mastery
1.1	Evaluate the characteristics of star, bus, mesh, and ring topologies, their advantages and disadvantages.		
1.2	Research the characteristics of segments and backbones.		
1.3	Define flow control and describe basic methods used in networking.		

STANDARD 2.0: Students will analyze major network operating systems, such as Microsoft Windows NT, Novell NetWare, and Unix.

Learning Expectations	Check the appropriate Mastery or Non-Mastery column	Mastery	Non-Mastery
2.1	Research client bases that best serve specific network operating systems and their resources.		
2.2	Analyze the directory services of the major network operating systems.		

STANDARD 3.0: Students will associate Internetwork Packet Exchange (IPX), Internet Protocol (IP), and NetBEUI with their appropriate functions.

Learning Expectations	Check the appropriate Mastery or Non-Mastery column	Mastery	Non-Mastery
3.1	Research the differences, advantages, and disadvantages of standard protocols.		
3.2	Set up and properly configure standard protocols.		
3.3	Configure IPX access lists and SA (selective availability) filters to control basic Novell and traffic.		

STANDARD 4.0: Students will be able to define RAID technology and how each level relates to fault tolerance or high availability.

Learning Expectations	Check the appropriate Mastery or Non-Mastery column	Mastery	Non-Mastery
4.1	Evaluate various types of RAID technology.		
4.2	Relate volumes as related to the hard drive.		
4.3	Research the various types of tape backup, and how each is used.		

STANDARD 5.0: Students will analyze the open system interconnect (OSI) reference model.

Learning Expectations	Check the appropriate Mastery or Non-Mastery column	Mastery	Non-Mastery
5.1	Evaluate the three categories of the open system interconnect (OSI) model.		
5.2	Evaluate the protocols, services, and functions that pertain to each layer of the open system interconnect (OSI) reference model.		

STANDARD 6.0: Students will recognize and describe the characteristics of networking media and connectors.

Learning Expectations	Check the appropriate Mastery or Non-Mastery column	Mastery	Non-Mastery
6.1	Compare the advantages and disadvantages of coax, Cat 3, Cat 5, fiber optic, UTP, and STP and the conditions under which they are appropriate.		
6.2	Recognize the visual appearance of RJ45 and BNC and how they are crimped.		

STANDARD 7.0: Students will compare the basic attributes, purpose, and function of network elements.

Learning Expectations	Check the appropriate Mastery or Non-Mastery column	Mastery	Non-Mastery
7.1	Compare and contrast full and half-duplexing.		
7.2	Differentiate a wide area network (WAN) and local area network (LAN).		
7.3	Compare and contrast a server, workstation, host, and client.		
7.4	Analyze server-based networking and peer-to-peer networking.		
7.5	Research the terms cable, network interface card (NIC), and router.		
7.6	Compare and contrast broadband and baseband.		

STANDARD 8.0: Students will study router and technology switching.

Learning Expectations	Check the appropriate Mastery or Non-Mastery column	Mastery	Non-Mastery
8.1	Demonstrate basic to advanced router and switching configurations.		
8.2	Research management of basic to advanced networks.		

STANDARD 9.0 Students will manage networks..

Learning Expectations	Check the appropriate Mastery or Non-Mastery column	Mastery	Non-Mastery
9.1	Research network management involving network documentation, network security, environmental factors, network performance, server administration, and network troubleshooting.		
9.2	Analyze networking systems, determine problems, and make corrections.		
9.3	Manages an advanced networking system.		

STANDARD 10.0: Students will demonstrate leadership, citizenship, and teamwork skills required for success in the school, community, and workplace.

Learning Expectations	Check the appropriate Mastery or Non-Mastery column	Mastery	Non-Mastery
10.1	Demonstrate positive leadership skills in the classroom and community.		
10.2	Participate in SkillsUSA-VICA as an integral part of classroom instruction.		
10.3	Investigate how technology has made an impact on networking architecture in the past 2 years.		
10.4	Construct a job search network.		

Additional Comments _____